

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0006064
CSSTP-0006-00(064)

Murray County
GDOT District 6 - Cartersville
SR 286 @ Cobb Road &
@ Tom Gregory Road – Turn Lanes
No Build

OFFICE Design Policy & Support

DATE April 26, 2016

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Hiral Patel, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Darryl VanMeter, State Innovative Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Eric Duff, State Environmental Administrator
Bill DuVall, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Lee Upkins, State Utilities Engineer
Richard Cobb, Statewide Location Bureau Chief
Andy Casey, State Roadway Design Engineer
Attn: Robert Elam, Design Group Manager
DeWayne Comer, District Engineer
David Acree, District Preconstruction Engineer
Jun Birnkammer, District Utilities Engineer
Nicole Law, Project Manager
BOARD MEMBER - 14th Congressional District

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

Project Type: <u>Turn Lanes – No Build</u>	P.I. Number: <u>0006064</u>	
GDOT District: <u>6</u>	County: <u>Murray</u>	
Federal Route Number: <u>N/A</u>	State Route Number: <u>286</u>	
Project Number: <u>CSSTP-0006-00(064)</u>		

SR 286 corridor at Cobb Road, Eton Elementary Driveway, and Tom Gregory Road - auxiliary left turn lanes – No Build.

Submitted for approval:

<u>C. Andy Cury</u> State Roadway Design Engineer	<u>3/28/16</u> Date
<u>Albert V. Shelby</u> State Program Delivery Engineer	<u>3/29/16</u> Date
<u>[Signature]</u> <u>Kurt</u> GDOT Project Manager	<u>3/29/16</u> Date

Recommendation for approval:

* <u>Eric Duff/KLP</u> State Environmental Administrator	<u>4-1-16</u> Date
FOR * <u>Christopher Raymond/KLP</u> State Traffic Engineer	<u>4-14-16</u> Date
* <u>Lisa Myers/KLP</u> Project Review Engineer	<u>3-31-16</u> Date
* <u>Yulonda Pride-Foster/KLP</u> State Utilities Engineer	<u>3-31-16</u> Date
_____ District Engineer	_____ Date

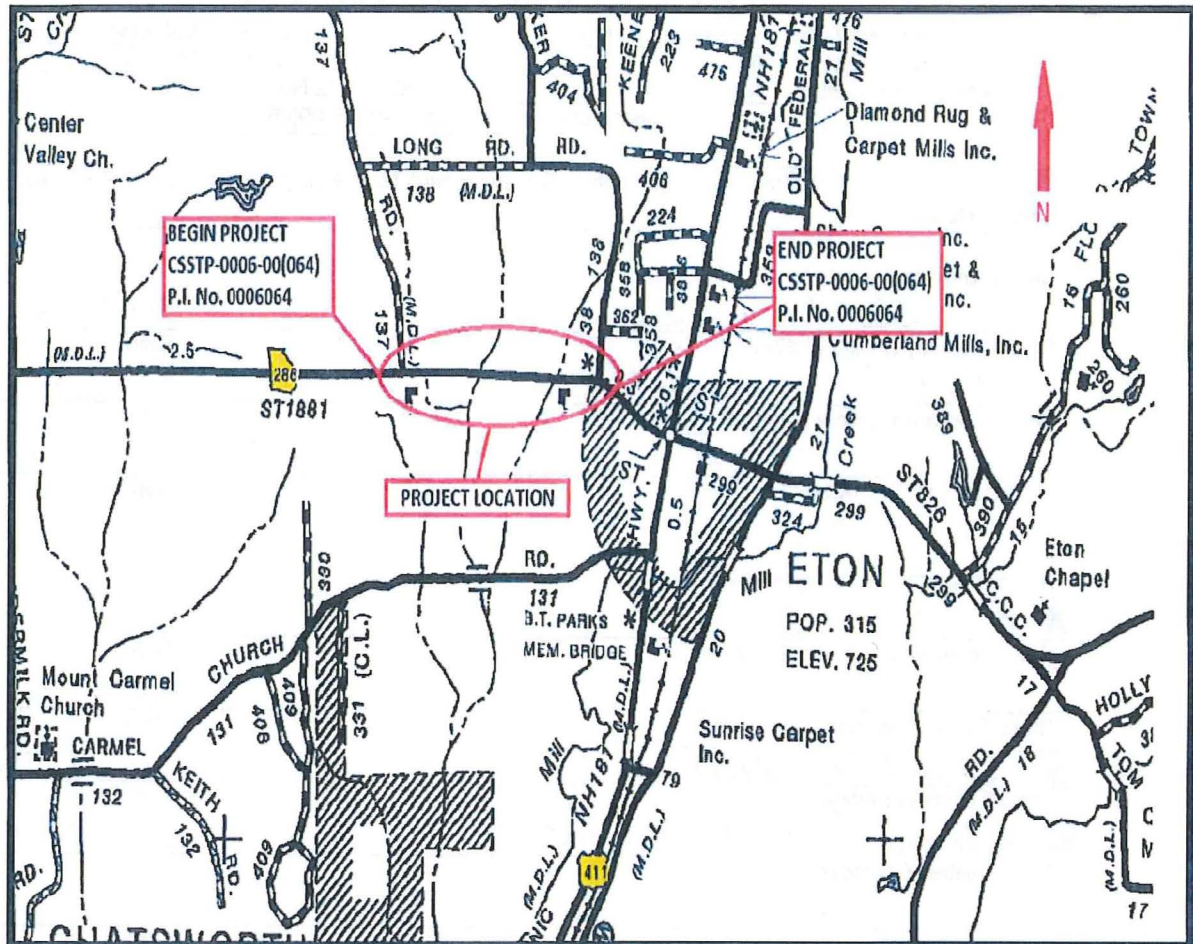
✓ → ☒ MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).

☒ Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

<u>Chellia R. Vance</u> State Transportation Planning Administrator	<u>4-11-16</u> Date
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County: Murray

PROJECT LOCATION MAP



(Not to scale)

County: Murray

PLANNING AND BACKGROUND

Project Justification Statement: The proposed turn lane project was programmed by District 6 in 2003 via GDOT's Project Nomination Review Committee (PNRC). This project was originally recommended in the Traffic Engineering Study for proposed safety projects in Murray County from the District 6 Office. This project is located west of downtown Eton in Murray County on SR 286 between SR 225 and SR61/US 411. Currently, SR 286 is a two lane facility that is functionally classified as a rural minor arterial and is not listed as a designated bike route in the Statewide Bicycle Plan.

Based upon existing traffic information obtained from the GDOT STARS database, the 2011 existing Average Annual Daily Traffic (AADT) on SR 286 west of Cobb Road is 4,730 vehicles per day and the traffic east of Tom Gregory Road is 6,800 vehicles per day. With these current volumes the route operates at a LOS C both east and west of the proposed project. Assuming a 1.0% annual growth rate, the future year, (2036), projected traffic volumes range from 5,591 AADT east of Cobb Road to 8,721 AADT west of Tom Gregory Road. This represents a LOS "C" and LOS "D" respectively. Analysis of the last three years (2007-2009) of available crash data in the area show that the crash rates for this section of SR 286 were above the statewide average one (2008) of the three years reviewed. There were a total of 9 crashes in the limits of the project in the three years reviewed with 33% of the crashes being angle crashes and 33% being rear end crashes.

There is a need to improve turning movements near the Eton Elementary School which is located within the limits of the project. Cobb Road is on the west side of the school and Tom Gregory Road is on the east side of the school. During peak travel times there are higher turning movements into and out of the elementary school and the intersections of Cobb Road and Tom Gregory Road.

The proposed improvement is needed to reduce crash frequency and severity along the SR 286 corridor at Cobb Road and Tom Gregory Road. By providing operational improvements on this corridor, traffic operation is expected to improve at this location near the elementary school. Final determination of logical termini is dependent on the Office of Environmental Services coordination with FHWA during the development of the environmental document.

Existing conditions: This project is located west of downtown Eton in Murray County on SR 286 between SR 225 and SR61/US 411. Currently, SR 286 is a two lane facility that is functionally classified as a rural minor arterial. There are currently no sidewalk or bike lanes at this location. There are right turn auxiliary lanes at Tom Gregory Road and at the entrance to Eton Elementary School. The approximate length of the project is 0.40 miles.

Other projects in the area: None

MPO: N/A - Project not in MPO

TIP #: N/A

Congressional District(s): 14

Federal Oversight: ☐ PoDI ☒ Exempt ☐ State Funded ☐ Other

Projected Traffic: ADT 24 HR T: 6.5 %

Current Year (2012): 6,500 Open Year (2020): 7,650 Design Year (2040): 11,350

Traffic Projections Performed by: GDOT Office of Planning

Functional Classification (Mainline): Rural Minor Arterial

County: Murray

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Concept Meeting: Roadway design met with Planning (Megan Weiss) and the Project Manager (Nicole Law) on February 26, 2016. The Project Justification Statement was discussed as well as the Traffic and other meetings as part of the coordination and it was agreed to proceed with a No Build Limited Scope Concept.

Other coordination to date:

- Roadway design met with the principal of Eton Elementary (Judy Redmond) on January 15, 2016.
- The District Traffic Engineer (Grant Waldrop) was consulted to review the traffic information on February 18, 2016.
- The District Engineer (DeWayne Comer) met with Murray County Sole Commissioner on February 24, 2016.

ALTERNATIVES DISCUSSION

Alternative selection:

Preferred No-Build Alternative: The corridor will remain a two-lane arterial with no auxiliary left turn lanes.			
Estimated Property Impacts:	0	Estimated Total Cost:	\$0.00
Estimated ROW Cost:	\$0.00	Estimated CST Time:	0
<p>Rationale: Reason(s) why this alternative was selected:</p> <ol style="list-style-type: none"> 1. Analysis of the crash history of the intersections did not indicate a safety concern. 2. Capacity analysis of the No Build resulted in LOS that met or exceeded GDOT desirable design criteria. 3. The Project Justification Statement which included the TE Study for the entire corridor could not be verified. <p>A field visit was made during peak demands to the project and no operational issues were observed. During the same visit design met with the stakeholder at the School and they noted that there was no need for the project. A later meeting was held with another stakeholder the County Commissioner and they did not see a need for the project as well.</p> <p>The District Traffic Engineer was provided the traffic and crash information and based on operations and safety concurred that there was no need for additional lanes.</p>			

Alternative 1: Addition of left turn auxiliary lane providing turning movement onto Cobb Road and Tom Gregory Road and into Eton Elementary School.			
Estimated Property Impacts:	11	Estimated Total Cost:	\$1,339,049.65
Estimated ROW Cost:	\$356,399	Estimated CST Time:	\$276,110.65
Rationale: The Operational, Safety, and Capacity analysis showed turn lanes were not warranted.			

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Crash summaries
2. Traffic diagrams
3. Capacity analysis summary
4. Crash Reports Narratives

County: Murray

APPROVALS

Concur: *Thia Patel*
Director of Engineering

Approve: *Margaret B. Pikel* *4.22.16*
Chief Engineer Date

ATTACHMENT 1 - CRASH SUMMARY

Safety Assessment

The Georgia Electronic Accident Reporting System (GEARS) was searched for incidents that may have occurred at the intersections during the time period of January 1, 2011 through February 2, 2016. Thirteen crashes were found to have occurred at these intersections during this 5 year period. The crash reports were reviewed for all thirteen crashes and only two crashes could potentially be related to safety issues as seen in Table 1. Neither of the crashes involved any fatalities and only one had an injury reported. The intersections crash reports are summarized and reported in table 2 below, also reference Attachment 4 for more detailed information regarding the thirteen crashes.

Year	Total Crashes	Angle	Rear End	Sideswipe	Injury	Fatal
2011	1	0	1	0	1	0
2012	0	0	0	0	0	0
2013	1	1	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0

Table 1 - SR 286 at Cobb Road Intersection, Eton Elementary Driveway, and Tom Gregory Road Intersection

Crash	Description	Related to Left Turns (Yes/No)
1	Vehicle on Cobb Road did not yield to Vehicle on SR 286	No
2	Crash was at back of Eton Elementary on Tom Gregory Road	No
3	Vehicle did not stop at stop sign on Cobb Road	No
4	Vehicle ran off roadway, no other vehicles involved	No
5	Crash was at back of Eton Elementary on Tom Gregory Road	No
6	Vehicle was turning left onto Cobb Road when hit from rear	Yes
7	Vehicle was turning left onto Cobb Road when hit from rear	Yes
8	Deer ran out in front of vehicle	No
9	Driver was distracted by cell phone and ran off roadway	No
10	Vehicle admitted to road rage and slammed brakes on	No
11	Deer ran out in front of vehicle	No
12	Georgia State Patrol vehicle chase	No
13	Vehicle on Cobb Road did not yield to Vehicle on SR 286	No

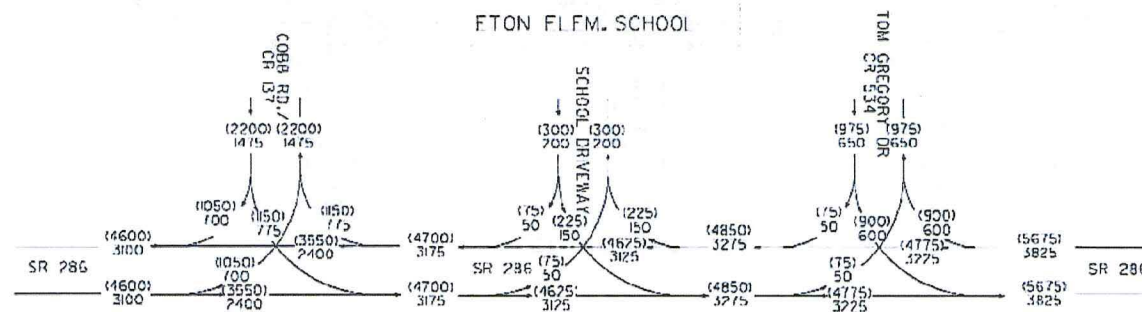
Table 2 - Crash Reports Summary

MURRAY COUNTY

BUILD-NO-BUILD



ETON FLFM. SCHOOL



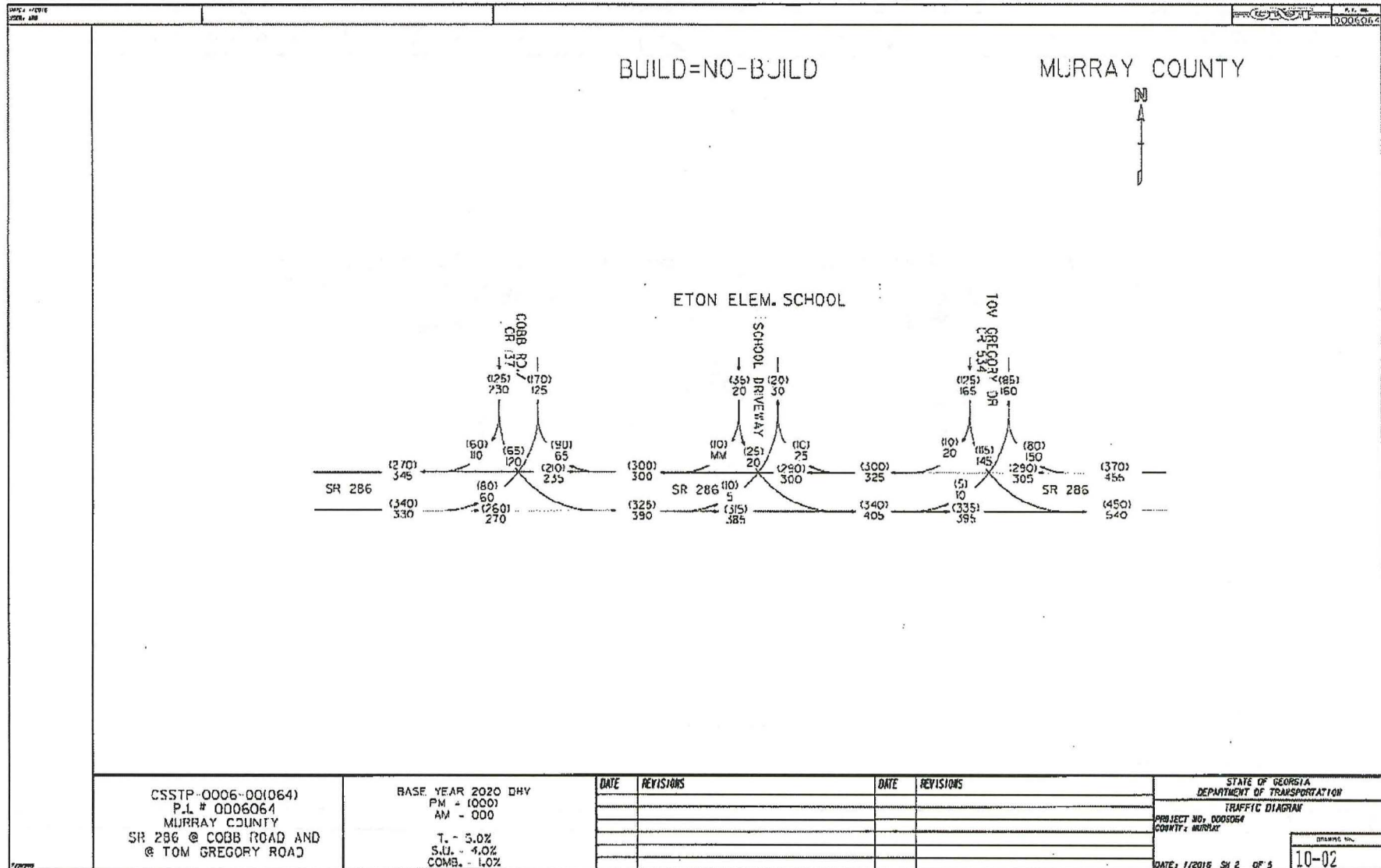
CSSTP-0006-00(064)
P.L. # 0006064
MURRAY COUNTY
SR 286 @ COBB ROAD AND
@ TOM GREGORY ROAD

2040 ADT = (000)
2020 ADT = 000
24-HOUR T. = 6.5%
S.U. = 4.0%
COMB. = 2.5%

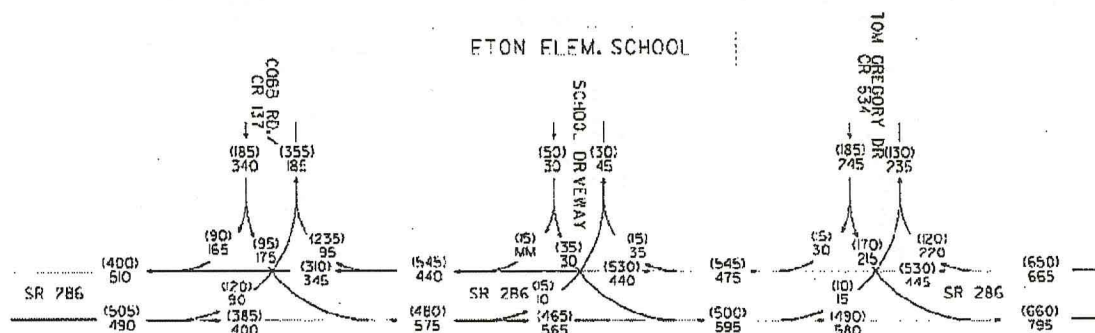
DATE	REVISIONS	DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
PROJECT NO. 0006064
COUNTY: MURRAY
DATE: 1/2016 SH 1 OF 5

10-01



MURRAY COUNTY



DESIGN YEAR 2040 DHV
PM = 1000
AM = 000
I. = 5.0%
S.U. = 4.0%
COMB. = 1.0%

[illegible]

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
PROJECT NO: 0005064
COUNTY: MURRAY
DATE: 1/20/16 SH 3 OF 5
DRAWING
10-03

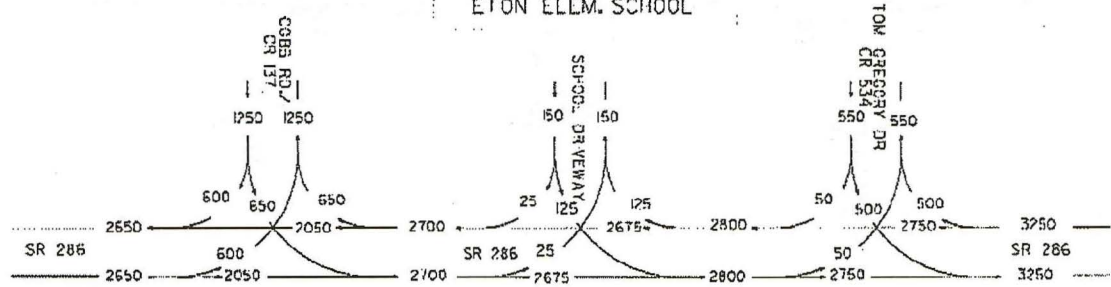
MURRAY COUNTY



TOM GREGORY DR
CR 534

ETON ELEM. SCHOOL

TC # 0156



TC # 0158

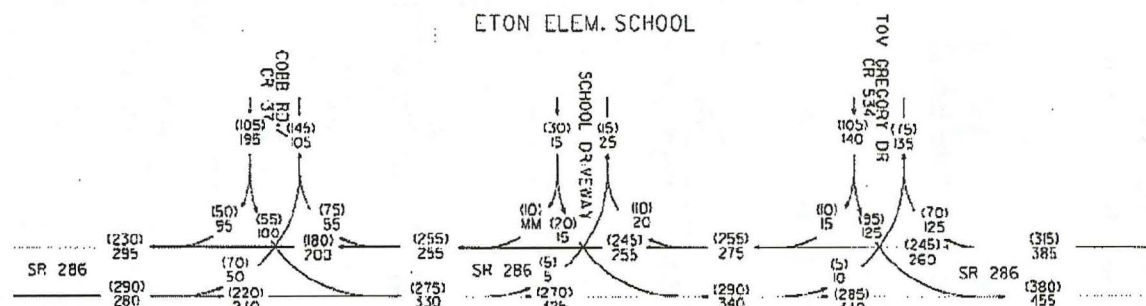
CSSTP-0006-001064) P.L. # 0006064 MURRAY COUNTY SR 286 @ COBB ROAD AND @ TOM GREGORY ROAD	EXISTING 2012 ADT 24-HOUR I. = 6.5% S.U. = 4.0% COMB. = 2.5%	DATE	REVISIONS	DATE	REVISIONS	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION TRAFFIC DIAGRAM PROJECT NO. 0006064 COUNTY: MURRAY DATE: 1/20/16 SH 4 OF 5
						DRAWING NO. 10-04

MURRAY COUNTY



TOM GREGORY DR
CR 534

ETON ELEM. SCHOOL



CSSTP-0006-00064
P.L. # 0006064
MURRAY COUNTY
SR 286 @ COBB ROAD AND
@ TOM GREGORY ROAD

EXISTING 2012 DHV
PM - (000)
AM - 000

I. = 5.0%
S.L. = 4.0%
COMB. = .0%

DATE	REVISIONS

DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
PROJECT NO. 0006064
COUNTY: MURRAY
DATE: 1/2016 SH 5 OF 5

DURING NO. 10-05

ATTACHMENT 3: CAPACITY ANALYSIS SUMMARY

Operational Analysis

As shown in tables 2 through 9, the operational delay and level of service (LOS) are presented for the Existing, Base, and Design year traffic. The tables show the NO BUILD analysis of the Eastbound and Westbound movements along SR 286 at the intersections of Cobb Road, Eton Elementary School, and Tom Gregory Road.

Approach	Movement	2012 – Existing Conditions					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.04	7.9	A	0.05	7.9	A
Westbound	T, R	---	---	---	---	---	---

Table 2 – SR 286 at Cobb Road Intersection – 2012

Approach	Movement	2020 – Base Year					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.05	8.0	A	0.06	8.1	A
Westbound	T, R	---	---	---	---	---	---

Table 3 – SR 286 at Cobb Road Intersection – 2020

Approach	Movement	2040 – Design Year					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.08	8.6	A	0.12	9.0	A
Westbound	T, R	---	---	---	---	---	---

Table 4 – SR 286 at Cobb Road Intersection – 2040

Approach	Movement	2012 – Existing Conditions					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.00	7.8	A	0.00	7.8	A
Westbound	T, R	---	---	---	---	---	---

Table 5 – SR 286 at Eton Elementary School Intersection – 2012

Approach	Movement	2020 – Base Year					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.00	8.0	A	0.01	7.9	A
Westbound	T, R	---	---	---	---	---	---

Table 6 – SR 286 at Eton Elementary School Intersection – 2020

ATTACHMENT 3: CAPACITY ANALYSIS SUMMARY

Approach	Movement	2040 – Design Year					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.01	8.4	A	0.01	8.6	A
Westbound	T, R	---	---	---	---	---	---

Table 7 – SR 286 at Eton Elementary School Intersection – 2040

Approach	Movement	2012 – Existing Conditions					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.01	8.1	A	0.00	7.9	A
Westbound	T, R	---	---	---	---	---	---

Table 8 – SR 286 at Tom Gregory Road Intersection – 2012

Approach	Movement	2020 – Base Year					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.01	8.3	A	0.01	8.1	A
Westbound	T, R	---	---	---	---	---	---

Table 9 – SR 286 at Tom Gregory Road Intersection – 2020

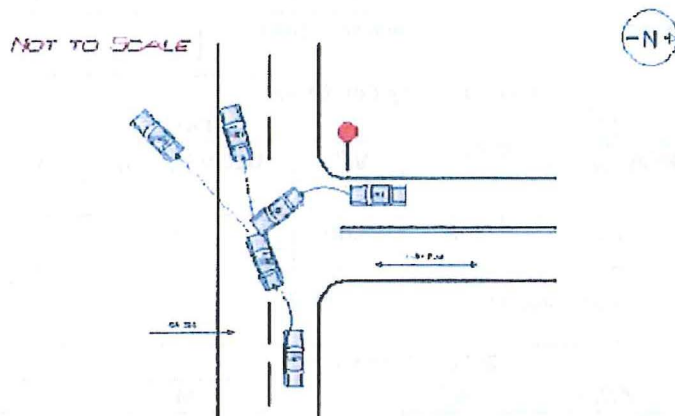
Approach	Movement	2040 – Design Year					
		AM			PM		
		V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
Minor Road Stop Control							
Eastbound	L, T	0.02	9.0	A	0.01	8.9	A
Westbound	T, R	---	---	---	---	---	---

Table 10 – SR 286 at Tom Gregory Road Intersection – 2040

ATTACHMENT 4 – CRASH REPORTS

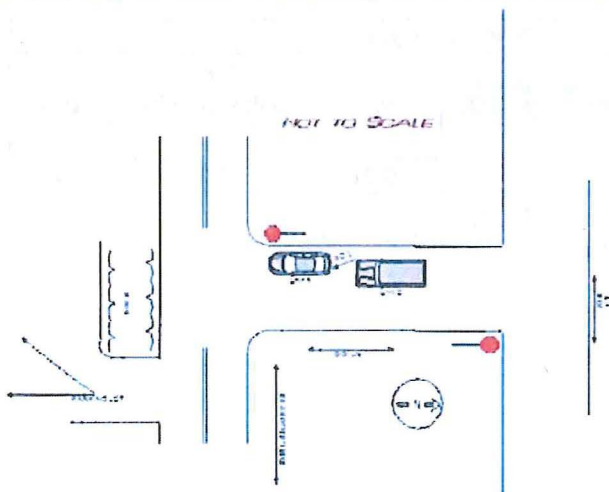
NARRATIVE: ACCIDENT 1

Vehicle #1 was traveling south on Cobb Road. Vehicle #2 was traveling west on GA 286. Driver of Vehicle #1 stated that she did not see Vehicle #2 approaching. Vehicle #1 pulled into the path of Vehicle #2 causing Vehicle #2 to strike Vehicle #1 in the front with the front of Vehicle #2. Area of impact was in the center of roadway on GA 286. This accident was VHS recorded, tape #402-010-2011.



NARRATIVE: ACCIDENT 2

The driver of vehicle #1 was stopped at the stop sign at GIGI LN waiting to turn onto Tom Gregory Rd when vehicle #2 struck vehicle #1 in the left rear. The driver of vehicle #2 stated that a flower pot weighing approximately 100lbs rolled from the back seat striking the drivers seat causing him to become distracted and possibly remove his foot from the brake.

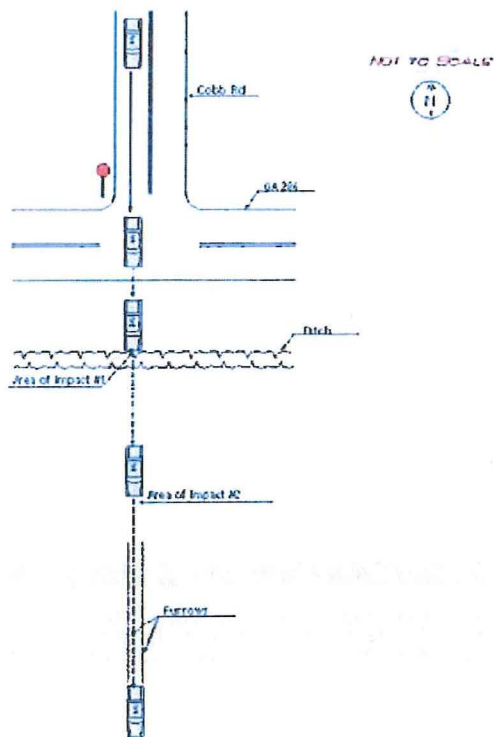


NARRATIVE: ACCIDENT 3

Vehicle #1 was traveling on Cobb Road southbound. Vehicle #1 failed to stop at the stop sign at the intersection of Cobb Road at GA 286. Vehicle #1 traveled across GA 286 and traveled approximately 20 feet on the south shoulder of GA 286 and struck a embankment with undercarriage of vehicle #1. Vehicle #1 then became airborne and traveled approximately 33 feet. Vehicle #1 struck a field with the undercarriage of vehicle #1. After second area of impact vehicle #1 traveled approximately 160 feet in the field coming to rest facing south. This crash investigation was video and audio recorded on DVD # 842-012-2012.

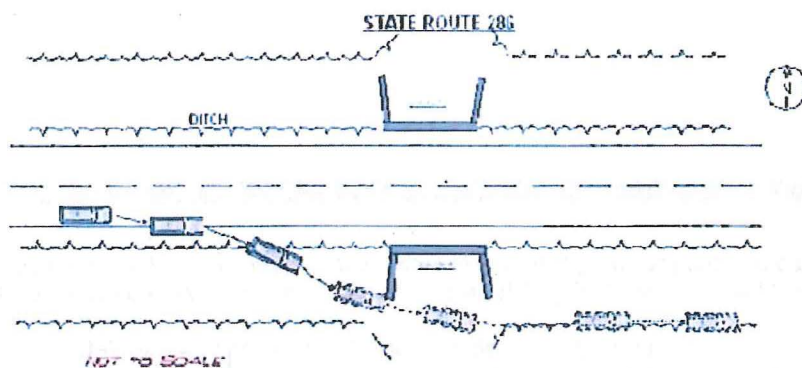
The Georgia Bureau of Investigations blood test results were positive on Richard Defoor for Marijuana(THC)

ATTACHMENT 4 – CRASH REPORTS



NARRATIVE: ACCIDENT 4

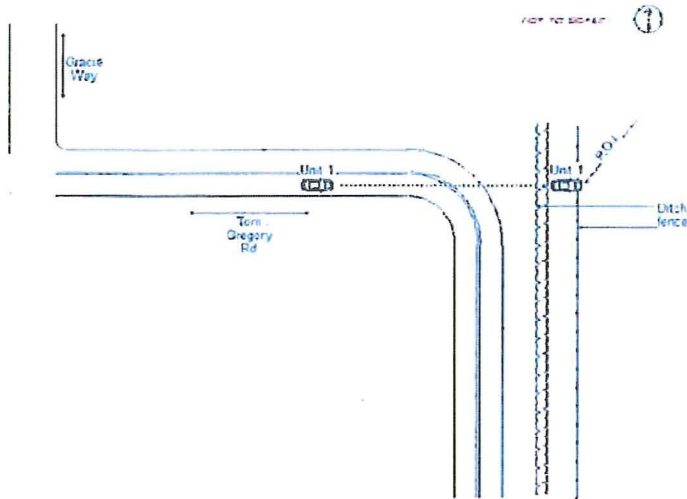
Vehicle # 1 was traveling eastbound on State Route 286. Vehicle # 1 right side tires dropped off the roadway and onto the soft shoulder. Vehicle # 1 veered to the right traveling down a steep ditch embankment striking a concrete culvert with its left side. Vehicle # 1 continued eastbound in the ditch coming to a controlled rest facing east. Crash scene recorded on DVD 190-003-2012.



NARRATIVE: ACCIDENT 5

Vehicle was traveling east on Tom Gregory rd east of Gracie Way. The vehicle approached the curve traveling too fast and drove off of the roadway into an embankment before coming to rest.

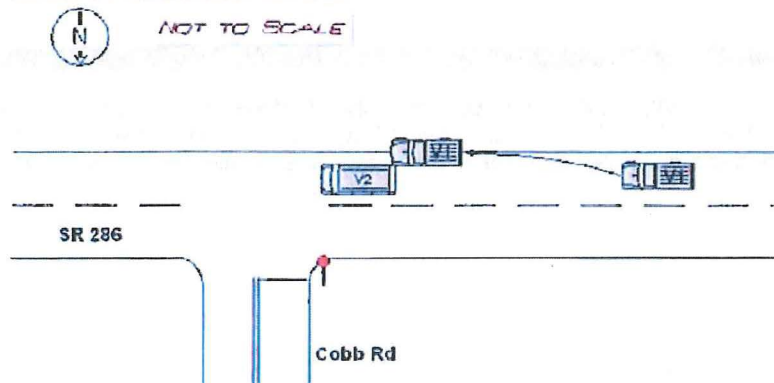
ATTACHMENT 4 – CRASH REPORTS



NARRATIVE: ACCIDENT 6

Vehicle's #1 and #2 were traveling east on SR 286. Vehicle #2 stopped behind another vehicle turning left onto Cobb Road. Vehicle #1 struck vehicle #2 in the right rear with its left front. Area of impact was in the eastbound lane on SR 286 and determined by driver's statements, skid marks, and vehicle's final rest. This investigation was audio/video recorded. (DVD#856-020-13)

Vehicle #1 Skid Marks: 46.7ft BI

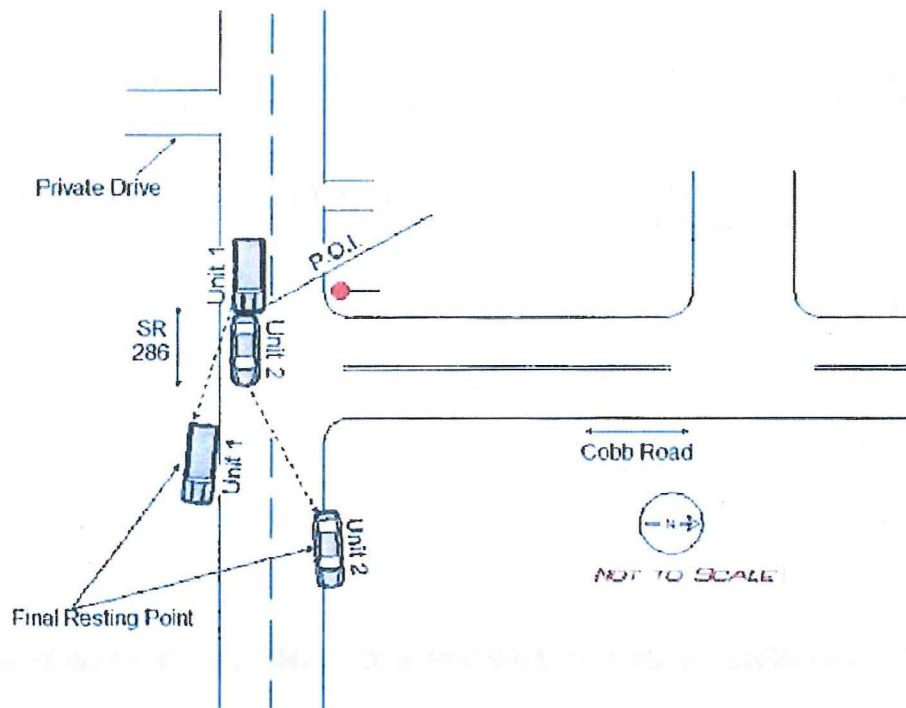


NARRATIVE: ACCIDENT 7

Vehicle 2 was traveling east on SR 286 and was stopped preparing to turn onto Cobb road to travel north. Vehicle 1 was also traveling east on SR 286 behind vehicle 2 when it failed to stop striking Vehicle 1 in the rear end. Both vehicles had extensive damage.

Driver of Vehicle 2 stated that she was stopped with her left turn signal on when vehicle 1 struck her. Driver of Vehicle 1 stated that Vehicle was was stopping to turn left and that he did not get stopped in time.

ATTACHMENT 4 – CRASH REPORTS



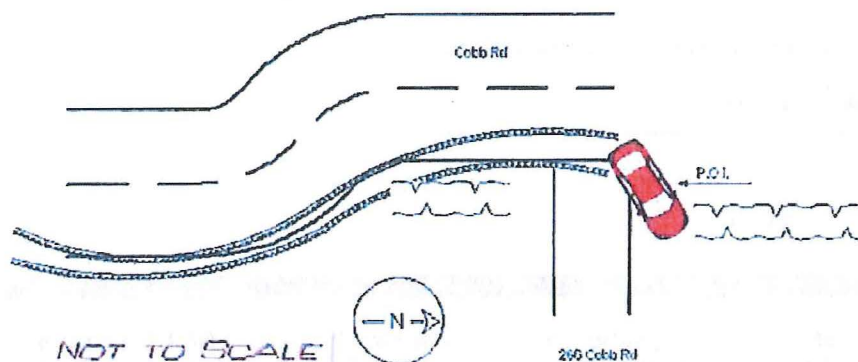
NARRATIVE: ACCIDENT 8

DRIVER #1 STATES WHILE TRAVELING EAST ON HWY 286 A DEER RAN OUT IN FRONT OF HER. DRIVER #1 STATES SHE HIT THE DEER CAUSING DAMAGE TO HER VEHICLE.

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NARRATIVE: ACCIDENT 9

Mr. Hampton was traveling north on Cobb Rd when he became distracted by his cell phone and left the roadway.



NARRATIVE: ACCIDENT 10

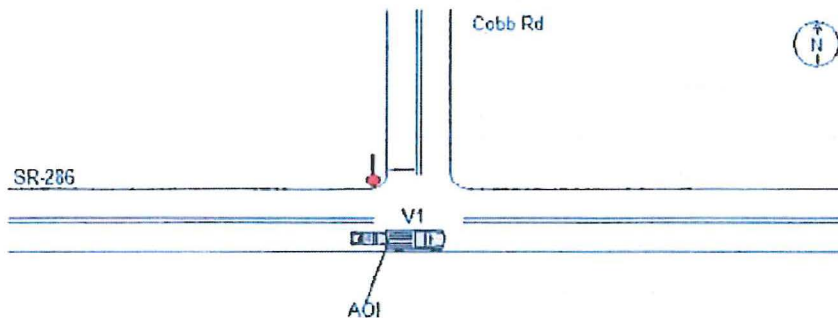
Vehicle #1 was traveling east on SR-286 and was stopped for traffic. Vehicle #2 was traveling east on SR-286 behind Vehicle #1 and was stopped for traffic. Vehicle #1 began to accelerate and drive in a reckless manor and quickly applied full brakes in which Vehicle #2 struck the rear of Vehicle #1 with the front of Vehicle #2. Area of impact was in the eastbound lane of SR-

ATTACHMENT 4 – CRASH REPORTS

286 as determined by driver statements. This crash investigation was video recorded #303-42-14.

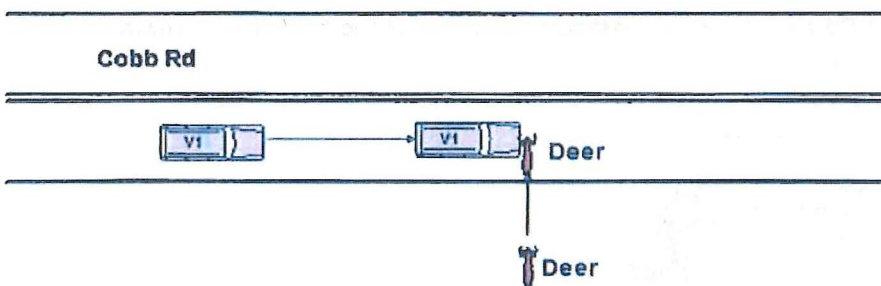
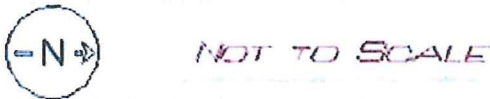
Upon arrival, Sheriff's deputy told me that driver #1 admitted he had road rage due to driver #2 "not driving fast enough". When driver #1 was asked about his statement, he admitted he had been driving reckless and to purposely "slamming" on his brakes in front of vehicle #2.

Driver #2 stated it started a couple miles back when driver #1 tried to pass but couldn't due to traffic. Driver #2 stated he was only driving the speed limit and wasn't about to speed cause driver #1 was riding his bumper.



NARRATIVE: ACCIDENT 11

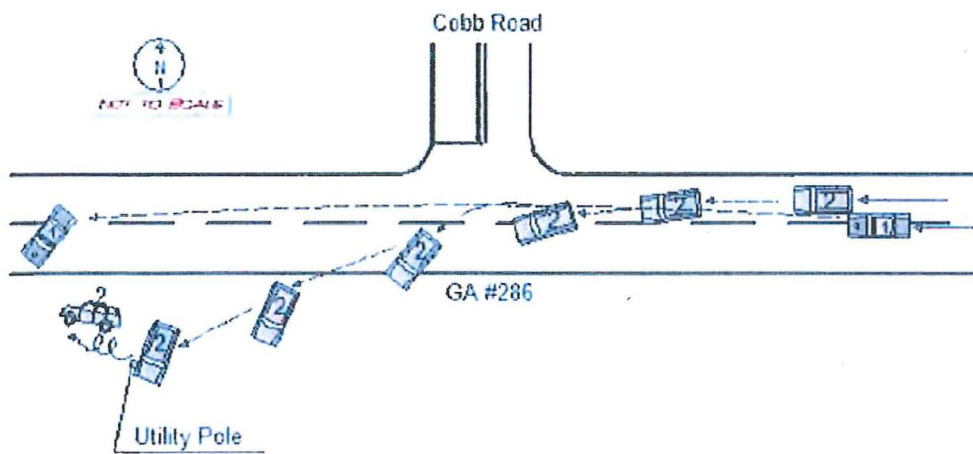
Vehicle #1 was traveling north on Cobb Road. A deer was traveling west across Cobb Road. Vehicle #1 struck the deer with its front. Area of impact was in the northbound lane on Cobb Road and determined by driver's statements. This investigation was audio/video recorded. (DVD#856-058-14)



NARRATIVE: ACCIDENT 12

Vehicle 1, a Georgia State Patrol vehicle with all emergency equipment activated, was traveling west on GA #286 pursuing vehicle 2. Vehicle 2 was traveling west on GA #286 attempting to elude driver of vehicle 1, Police Officers and Sheriff's Deputies. In an attempt to terminate the pursuit, driver of vehicle 1 placed the right front of vehicle 1 on the left rear of vehicle 2. Driver of vehicle 2 lost control of vehicle 2. Vehicle 2 began a counter clockwise rotation and left the south side of GA #286. Vehicle 2 struck a utility pole with the right front of vehicle 2. After this impact, vehicle 2 rotated counter clockwise and overturned onto its right side coming to a final, uncontrolled rest facing west. After the initial impact, vehicle 1 was brought to a controlled rest on GA #286 facing south. The roadway was temporarily blocked until the GBI completed their on scene investigation, not due to the crash.

ATTACHMENT 4 – CRASH REPORTS



NARRATIVE: ACCIDENT 13

Vehicle 1 was making a left turn onto hwy 286 pulling into the path of vehicle 2 hitting vehicle 2 in right rear causing damage

